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ONLINE AND OFFLINE PARTICIPATION AT THE LOCAL LEVEL

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Rosa Borge, Clelia Colombo & Yanina Welp

ONLINE AND OFFLINE PARTICIPATION AT THE LOCAL LEVEL

A quantitative analysis of the Catalan municipalities

This article presents an analysis on local participatory experiences in Catalonia, both online and in-person. The analysis is based on a database set up by the authors. The article carries out an explanatory analysis of local participatory initiatives (on- and offline) taking into account political variables (not usually considered in this kind of analysis) and also classical socio-economic variables that characterize municipalities. Hence, we add a quantitative analysis to the numerous case studies on local e-participation experiences. We have chosen Catalonia because it is one of the European regions with more initiatives and a considerable local government support for citizen participation initiatives since the 1980s. The article offers a characterization of these experiences and an explanatory analysis, considering: (i) the institutional context in which these experiences are embedded, (ii) the citizen participation processes and mechanisms online and (iii) a set of explanatory variables composed of the population size and the province to which the municipality belongs, the political tendency of the mayor, the electoral abstention rate, age, income, level of education, broadband connection and users of the Internet in the municipality. The model that we present is explanatory for municipalities with more than 20,000 inhabitants but it is not for fewer than 20,000 inhabitants. Actually, the majority of these latter municipalities have not developed any participatory activities. Among all the variables, population size is the most influential variable and affects the influence of other variables, such as the political party of the mayor, the local abstention rate and the province.

Keywords electronic participation; citizen participation; web sites; information and communication technologies (ICTs); municipalities; city councils

1. Introduction

In the last decades, our representative democracies have been unable to maintain citizens convinced that existing institutions deserve acceptance and support. In this context of crisis, many institutional citizen participation initiatives, including those based on information and communication technologies (ICTs), have been developed with the aim of revitalizing democracy, increasing transparency in public management and spreading new political communication and participatory spaces.

The local level of government has been a prolific arena for these activities. However, these processes and their results have been heterogeneous and no data has been systematically collected on them. Thus, it is necessary to assemble the data on participatory initiatives and analyse the factors that influence their deployment. In order to be able to approach this double objective, this research is focused on Catalonia, one of Spain's Autonomous Communities with more off- and online initiatives and with greater governmental support¹ for citizen participation since the 1980s.

Specifically, we will analyse: (i) the evolution of the institutional context in which these initiatives are developed, (ii) the electronic participation initiatives and mechanisms on- and offline (participation processes; interactive, deliberative and participative channels in local government web sites; and the consultative councils) and (iii) the explanatory variables that influence the deployment of initiatives (such as population size, the mayor's political tendency, the level of electoral abstention, age, income and the level of education in the municipality). We based the selection of the variables on the existing literature and its availability through public databases.

2. The state-of-the-art: democratic renewal through ICTS and research on electronic participation

As we mentioned before, in the last decades, some of the main actors and institutions of the representative democracy are suffering from a constant loss of confidence by the citizenry. That is, democratic systems are experiencing difficulties in interacting with the citizens and maintaining their acceptance (Lipset 1992). Some basic elements that exemplify this situation are: lack of interest in politics, the decrease in electoral turnout since the 1980s (in OECD countries), distrust towards institutions, authorities and representatives, and the fall in partisan and union affiliation (Clark & Inglehart 1998; Dalton & Watenberg 2000; Hague & Loader 1999; Huse 2003; Kaase & Newton 1995; Putnam 2003). In addition, new forms of participation are being developed, very frequently on the margins of or outside the institutionalized polity.

At the same time, public administrations are immersed in modernization processes seeking to improve relations with citizens, offer more effective services

and reduce costs. Throughout this process, social actors and citizens are starting to be integrated in decision-making and into public management, as a mechanism to increase effectiveness and favour implementation of policies (Brugué & Gomà 1998; Goss 2001; Kooiman 2005; Riley 2003). Thus, a certain change in the image that politicians and public administration's technicians have of citizen participation is taking place. It is considered that the elaboration and implementation of public policies cannot be made effectively without engaging the citizens, the groups and associations concerned.

In this context, the rise of ICTs is provoking numerous studies on its real influence for improving the relations between citizens and their representatives, for promoting citizen participation and for the changes within public administration. On the one hand, Internet allows a more efficient distribution of information and political documentation to citizens. On the other hand, the network also allows a faster, flexible and more interactive communication, making possible and facilitating the communication of interests, values and opinions between the diverse actors involved in the participation process (Colombo 2006a). Potentially, this technology could mean a profound improvement in citizen participation if initiatives are exclusively electronic or if they are complementing the in-person processes.

Following this interest, several studies have been carried out on local electronic participation. The local level is a privileged space for participation because this scale of government, so close to the citizenry, facilitates the dialogue between the actors (Schneider 2007). Also individual citizens' commitment to the local agenda is more frequent than to the national one (Mabileau *et al.* 1989; Parry *et al.* 1992). Nevertheless, empirical studies are scarce due to their technical difficulty and the fact that these e-participation initiatives are very recent.

In Spain, few studies have been carried out and most of them are focused on specific cases: Ramilo (2003) has examined several electronic participation initiatives led by Basque local governments; Martín (2005) and Martín *et al.* (2006) have analysed the local electronic forums called 'Ciudadanos.net'; Colombo (2006b) has studied a Catalan digital platform called 'Consensus'; Borge (2005) has classified and evaluated diverse local experiences in Spain and Barrat and Reniu (2004) and Reniu (2005) have studied the 'Madrid Participa' and 'Hortaleza2004' experiences.

On the other hand, up until now, quantitative studies with a representative sample of cases are even more scarce: Criado (2004) has analysed the city councils' web sites in the Autonomous Community of Madrid, Fenoll and Lluca (2006) have done the same with Girona province's city councils, Salvador *et al.* (2004) have studied the Catalan city councils' web sites and Ramilo (2007) has analysed all the city councils' web sites in the Basque Country. These studies analyse in detail interactive channels, administrative functionalities and services offered in the city councils' web sites.

Both types of study – those based on specific cases and the ones based on a representative sample – are basically descriptive or evaluative. That is, these studies describe the main characteristics of the participatory experiences and the functionalities in the web sites or evaluate the good practices contributing to favour communication or participation. However, they do not include explanatory variables and only Criado or Salvador's analysis show empirically the important influence of population size on the development of web sites.

But apart from these empirical studies, some theoretical and compilation efforts have been made in Spain with the objective of ordering the explanatory factors affecting local political participation initiatives, both online and offline. Colino and del Pino (2003) have examined the evolution of local participatory experiences in the last two decades in Spain, Germany, France and the UK. Although their study analyses citizen participation offline, many of the explanations compiled could be applied to e-participation. Borge (2007) has collected and ordered the explanatory factors influencing ICTs' usages by political institutions and actors. Borge agrees with Colino and del Pino that apart from national and local socio-economic and cultural characteristics, political factors are very influential. These factors can be institutional (constitutional status and level of decentralization, local government's attributions and competences), ideological (local government's political affiliation) and strategic (electoral competition, benefits foreseen by the city council, actors' objectives, coalitions in government, role of the opposition, etc.).

It is necessary here to make a reference to other empirical literature about offline participation explanations, which takes into account political variables. In Spain, Blanco and Font (2005) have analysed 15 Catalan municipalities and 7 municipalities in the rest of Spain. This study considers as important variables the following: factors belonging to the municipality,² the ideology of the parties and people who initiate participatory processes and the strategic reasons to do so. However, another study on the municipalities of the province of Barcelona (Martí & Rebollo 2006) shows that the mayor's party is not relevant because its indirect impact is caused by the population size.

There are also case studies such as the one carried out by Schneider (2007), which analyses the conditions and factors affecting institutionalized offline citizen participation in Buenos Aires and Barcelona. This study also emphasizes the relevance of institutional political factors (degree of autonomy, competencies, resources), ideological factors (city council's political affiliation) and strategic ones (political conflict or fragmentation, leadership).

Outside Spain, Coleman and Götze (2001) have carried out a classificatory study on electronic participatory initiatives around the world, Drücke (2005) has a compilation on local e-government initiatives throughout the world and Smith (2007) has reviewed the studies performed in the USA, UK and Canada about city council's online actions and web functionalities for participation.

In addition, there are a few researchers focused on international comparative studies on local electronic participation with explanatory intentions (Peart & Ramos 2007; Pratchett 2007; Pratchett *et al.* 2006). They take into account not only the classical socio-economic variables, but also political factors, both institutional and more strategic and circumstantial. In the case of the USA, Jensen (2007, Chapter 4) has analysed some of these explanatory variables in order to explain the development and accessibility of city councils' web site functionalities and online participatory initiatives.

Therefore, there are some variables and circumstances that can explain both on- and offline participatory experiences, but the setting up of online initiatives could also depend on other factors such as the broadband extension or the number of Internet users in a municipality. We will analyse these variables too.

As a conclusion, our objective is to collect and describe systematically the local participatory experiences (either electronic or in-person) taking place in Catalonia and to explain them considering socio-economic, technological and political variables. We wish to make a contribution to the literature mentioned above and to add a quantitative analysis to the already existing case studies in Spain.

3. Recent local government's evolution in Catalonia and Spain: the institutional context for participation

In Spain, since 1995 local administrations have reinforced their capacities, functions and resources due to political and legal changes and also to a change in mentality (Colino & Del Pino 2003, p. 11). On the one hand, the principles of subsidiarity and decentralization are being applied throughout, while new laws for the modernization of local government have been passed by the autonomous and central parliaments. On the other hand, city councils have become aware of their strategic position and influence in relation to public policies and to citizens' welfare, so they strongly claim for more financial and legal resources. The reinforcement of local administrations' agenda, strategic roles and control over public policies have, consequently, led to the development of different participatory initiatives.

With respect to the legal framework that has accompanied and, in numerous cases, encouraged the process referred to above, it has to be noted that the Spanish Constitution of 1978 conceives participation as both a fundamental citizen's right and the duty of public institutions. However, governments do not have the obligation to impel citizen participation processes in public decision-making. For this reason, in practice, the development of participatory initiatives depends to a large extent on the will of governmental teams (Paricio 1999).

However, in the last years important legislation, measures and regulations that support participatory processes have been adopted at different levels of government in Spain. Of all these measures, emphasis should be given to two.

The first is law 57/2003 of Measures of Modernization of the Local Government,³ which modifies the Law of Bases of Local Regime of 1985. Law 57/2003 sets up specific participatory mechanisms and processes that municipalities should carry out: a consultative city board that includes individual citizens, participatory budgets, better communication channels with the citizens through ICTs, a commission for collecting and dealing with complaints and suggestions, popular petitions and consultations, etc.

The second measure that deserves special attention is the Orders of the Generalitat of Catalonia⁴ designed by the Department of Institutional Relations and Participation that establish financial and technical support for local plans of participation and the use of ICTs for participatory purposes. The first Order dates from 2005, but it has also been issued again in 2006 and 2007 and it is intended to continue every year. These supports are provided for the municipality to be able to develop a strategic planning for citizen participation including the regulation of participation, setting up city boards and the development of projects and instruments specifically based on ICTs. In addition, the Department of Institutional Relations and Participation holds awards every year for the best local initiatives in citizen participation. In 2006, this department financed 309 municipalities for the development of participatory processes, 6 of which received the prize for the best participation experiences.

Also, since the 1990s the *Diputació de Barcelona*⁵ and numerous city councils have enacted different regulations for promoting citizen participation. The existence of knowledge and technical networks that have given support to the municipalities has been particularly important (Blanco & Font 2005; Martí & Rebollo 2006).⁶ For example, the large majority of the municipalities currently belong to the *Localret*, a consortium for the local development of ICTs and the exchange of know-how, and to the Catalan Open Administration Consortium, which fosters ICTs development policies in local administrations.

On the other hand, in Catalonia, the existence of numerous local participatory experiences in-person (or offline) has created a good environment for using ICTs for participation. Nowadays, ICTs are being used to support in-person initiatives (intranets, information provision and agendas, forums and surveys on in-person processes) but they also constitute new channels for participation (electronic voting and consultations, electronic debates and forums not linked to in-person processes). For instance, *Localret*, the above mentioned local consortium, is supporting an important digital platform for citizen participation called *Consensus*, which is currently used by 95 municipalities and is a good example of how web sites and the Internet can help and improve in-person participation.⁷

In addition, Catalonia is prepared for developing experiences based on ICTs because, in 2006, 94 per cent of Catalan city councils have web sites and the broadband reaches 71 per cent of Catalan city councils, covering 93 per cent of the population. Practically, all city councils with more than 5000 inhabitants have broadband connection, although only 47 per cent of those with fewer than

1,000 inhabitants have it in 2006.⁸ Also, 26.5 per cent of the population uses the Internet at least once a day and 15 per cent once per week, and 34 per cent of the houses had broadband.⁹ In 2007, the number of houses with broadband connection has risen to 46 per cent of the population.

In conclusion, in Catalonia there are numerous participatory initiatives on- and offline and sufficient extension of ICTs, but also there are networks for cooperation and exchange, a common general strategy for the development of participation defined by the Catalan government, financial resources for participation and a basic political consensus for maintaining the participatory initiatives. It can be said that Catalonia is reaching the same level of promotion, organization and extension of participation as Germany or Great Britain (Colino & Del Pino 2003, pp. 22–23).

4. Methodology

Citizen participation refers to any voluntary action by citizens more or less directly aimed at influencing public decision-making and the management of collective affairs (Verba *et al.* 1995). In this sense, citizen participation could be understood as taking part in those public affairs that affect society as a whole. Therefore, local citizen participation is aimed at influencing public decisions affecting the reality of the municipality. The participatory initiatives and processes can be highly varied: from participating in urban plans, in environmental agendas or in the municipality's budget to specific activities related to the promotion of women or young people, etc. . .¹⁰ The initiatives or processes can also be continuous or limited in time.

Also, the level of interaction and influence from the citizens to the local representatives can vary greatly. We can classify participatory initiatives depending on the extent of citizens' power in determining political decisions (Borge 2005, p. 3; Borge 2007, p. 296; Needham 2004, p. 46). Applying this to institutional local participation, the progression in the scale will be the following: the minimum level and the starting point is when a city council only offers information via web site, via their physical offices or by post; the second level stands for communication and is when a city council offers email communication, accepts letters and there are complaint offices, as well as offering information; the third stage is when the city council also sets up consultation devices such as surveys, polls, referenda, voting (electronic or non-electronic) and petitions; the fourth stage corresponds to deliberation and is when there are, apart from the previous elements, processes of discussion using electronic devices such as forums, chats, blogs, wikis or in-person initiatives, such as citizens' juries and panels, public meetings, participatory workshops and many other methods; the fifth stage of full participation is achieved when the city council – going through all the previous stages – develops a process or an experience, the results of which are binding for the city council itself.

Therefore, we will collect all these initiatives, both on- and offline initiatives, and the functionalities of the web sites developed by Catalan local governments, ranging from the informational level to the full involvement of citizens in public decisions. We regard as online initiatives the processes and experiences that include at least two electronic elements belonging to the first and second steps mentioned above: usually, the possibility of downloading documents and a contact email address. Any participatory initiatives that do not use electronic means or just use them to provide unidirectional information without interaction is considered offline. The initiatives that include any electronic form of communication, consultation or deliberation are considered as an online initiative.

The time frame analysed will be from 2000 until July 2007. In 2000, the number of people in Catalonia who used the Internet at least once per day was only 10 per cent of the population over 15 years old. From then until now, year 2007, the number of these frequent users reached 31 per cent of the population.¹¹

4.1. *Variables and hypothesis*

Specifically, the study analysed the following variables:

1. The dependent variables are as follows:
 - a. Local on- and offline initiatives or processes, whose compilation has been made basically from the information available on the web sites of city councils or belonging to municipalities. In addition, this compilation has been completed with information from the databases developed by the IDIGOL from the Catalan government¹² and the OIDP from Barcelona's City Council.¹³
 - b. Consultative boards or formal citizen participation organs for consultation – not necessarily for decision – which bring together representatives of the associations, elected officials, municipal technicians and individual citizens.
 - c. City council's web site functionalities and channels for interaction and participation. The functionalities and channels collected are: mailbox for complaints and suggestions, mailboxes or electronic mails addressed to the councillors, the mayor or the city council in general, mailboxes or electronic mails associated to online services, debate forums, blogs, surveys and online consultations.
2. The explanatory variables are sociological, economic, technological and political. We try to gather the main explanatory factors for the generation and diffusion of electronic and in-person citizen participation processes that have been described in the literature. The information has been compiled from databases of the Spanish National Statistics Institute (INE)¹⁴ and the Catalan Statistics Institute (IDESCAT).¹⁵ The following variables will be analysed:

- a *Municipality size*. The hypothesis guiding the analysis is that the greater the population size, the greater the probability of finding municipalities with citizen participation initiatives (Blanco & Font 2005; Brown & Schelin 2005; Criado 2004; Martí & Rebollo 2006; Salvador *et al.* 2004).
- b *The political composition of the municipal government*. We use the proxy of the mayor's party. The literature shows that usually the municipalities with more initiatives belong to the left (Blanco & Font 2005; Colino & Del Pino 2003; Schneider 2007).
- c *The percentage of electoral abstention in each municipality in local elections*. Blanco and Font (2005) point out that municipalities with higher abstention rates develop more initiatives, perhaps because the city council or the mayor try to regenerate the participatory culture in the municipality.
- d *The province of the municipality*, because there are differences between the provinces since the city councils belonging to the province of Barcelona have been much more active in developing participatory processes due to, among other factors, the impulse from the Diputació of Barcelona (Martí & Rebollo 2006).
- e *The sociological, economic and cultural context* given by the level of education (measured by the percentage of population with a university degree), the citizens' employment status (measured by the percentage of citizens with a job), family income per capita and the average age in the municipality.
- f In the case of online participation and web site functionalities, we will also analyse the *extension of broadband* and the number of Internet users within the municipalities.

The aim of the article is to ascertain which variables explain the setting up of participatory processes and experiences, and participatory channels through the website. We will not describe in detail or classify the different participatory experiences. The dependent variables are formed by four indexes: the first is made up of the total number of on- and offline initiatives, the second is formed by only the number of online initiatives, the third consists of the number of web sites channels plus the number of online initiatives and the fourth consists of the number of consultative boards.

4.2. *The sample*

In 2006, Catalonia had 946 municipalities. Among these, 52 per cent have <1,000 inhabitants. Despite the spread of small municipalities, however, 71 per cent of the population is concentrated on municipalities with more than 20,000 inhabitants and 55.5 per cent on municipalities of more than 50,000 (Table 1). Taking this data into account, for this research, we decided to study all municipalities with more than 20,000 inhabitants and take a sample of

TABLE 1 Sample and distribution of municipalities according to population size.

| <i>sections</i> | <i>population</i> | <i>% population</i> | <i>number of municipalities</i> | <i>% municipalities</i> | <i>number of municipalities in the sample</i> |
|---------------------|-------------------|-------------------------|-------------------------------------|-----------------------------|---|
| >50,000 | 3,957,477 | 55.5 | 23 | 2.4 | 23 |
| 50,000 to 20,001 | 1,094,217 | 15.3 | 37 | 4 | 37 |
| 20,000 to 5001 | 1,309,489 | 18.4 | 137 | 14.5 | 33 |
| 5000 to 1000 | 575,556 | 8.1 | 253 | 26.7 | 30 |
| <1000 | 197,958 | 2.8 | 496 | 52.4 | 0 |
| Total | 7,134,697 | 100 | 946 | 100 | 123 |

Source: Own analysis with data from INE (2006) <http://www.ine.es>.

the municipalities with a population between 1,000 and 20,000 inhabitants. The smallest municipalities (<1,000 inhabitants) were not included owing to the difficulty of analysing this group, often without web sites.

We considered it very important to analyse the municipalities with populations between 1,000 and 20,000 inhabitants because the systemic information drawn from these municipalities is not so frequent in comparison with municipalities of larger populations. Also, studies made not only in Catalonia but also in Spain and other countries¹⁶ show that population size is a determining factor for the development of web sites, online services and channels of interaction. Therefore, we have selected the municipalities for our sample following standard population sections. This kind of selection will allow us to check the explanatory weight of population size.¹⁷

The composition of the sample, as we can see in Table 1, includes 123 municipalities distributed along four population groups. All the municipalities, that is, the whole universe, were selected from the group with 20,001–50,000 and from the group with more than 50,000 inhabitants. With respect to the group with 5,001–20,000 and the group with 5,000–1000 inhabitants, a sample was chosen from each group according to systematic procedures that seek to select a similar number of municipalities both with initiatives and without them.¹⁸

5. Analysis

5.1. *Processes and mechanisms for participation by population size*

The distribution of the dependent variables by population size is given in Table 2.

TABLE 2 Participatory initiatives, webs and boards by population size.

| <i>sections</i> | <i>web functionalities</i> | <i>online participatory initiatives</i> | <i>consultative boards</i> | <i>participatory initiatives (including on- and offline)</i> | <i>number of initiatives</i> | <i>total</i> |
|------------------|----------------------------|---|----------------------------|--|------------------------------|--------------|
| >50,000 | 23 (100%*) | 17 (73%) | 21 (91.3%) | 22 (96%) | 1 (4%) | 23 |
| 50,000 to 20,001 | 37 (100%) | 9 (24.3%) | 33 (89.2%) | 16 (43.2%) | 20 (54%) | 37 |
| 20,000 to 5001 | 33 (100%) | 11 (33.3%) | 5 (15.2%) | 16 (48.5%) | 17 (51.5%) | 33 |
| 5000 to 1000 | 25** (83.3%) | 7 (23.3%) | 2 (6.6%) | 12 (40%) | 18 (60%) | 30 |
| Total | 117 | 44 | 61 | 67 | 56 | 123 |

Source: Own analysis.

*The percentages are calculated over the total number of municipalities in each population section. For example, in this case means 100 per cent of the municipalities with more than 50,000 inhabitants have at least one interactive channel in their web site.

**In the sample of municipalities with 5,000–1,000 inhabitants, two municipalities were included – Seva and Ivars d'Urgell – that do not have city council's web sites but they use instead a rudimentary web site supported by the provincial government (Diputació) that provides at least some basic electronic services such as a contact email address.

In the case of both higher sections, all municipalities have web sites and at least one interactive channel in their web sites. However, participatory processes predominate among the municipalities of over 50,000 inhabitants: 96 per cent of municipalities with over 50,000 inhabitants have developed participatory processes, whereas only 43 per cent of municipalities with 50,000–20,001 inhabitants have undertaken these initiatives. Therefore, more than half of the municipalities (54 per cent) of this last section have not decided to set up participatory processes. With respect to the electronic initiatives and in a like manner, 73 per cent of the municipalities with more than 50,000 inhabitants have developed them, whereas only 24 per cent of the municipalities with 50,000–20,001 inhabitants have deployed electronic participatory processes. Thus, it is evident that population size influences considerably both types of initiatives. We also have to take into account the fact that four provincial capitals and seven regional capitals¹⁹ are in the higher section.

In the case of the other two sections, the importance of population size can also be observed. A total of 48.5 per cent of municipalities with 20,000–5,001 inhabitants display participatory processes and the same applies to 40 per cent of the municipalities with 5,000–1,000 inhabitants. Also, 33 per cent of municipalities with 20,000–5,001 inhabitants have developed electronic participatory processes in contrast to only 23 per cent of the municipalities with 5,000–1,000. The existence of interactive channels on web sites is also less frequent in the case of the smallest municipalities: 83 per cent as opposed to 100 per cent of municipalities in the higher section. Nevertheless, we have to take into account that these numbers are not representative of the real proportion of municipalities with and without processes because we conducted the selection of cases so as to obtain a similar number of municipalities both with participatory processes and without them.²⁰

The graphical representation of Table 2 is given in Figure 1.

With respect to the Consultative Participatory Boards, the relationship between population size and the existence of boards in the municipalities is even stronger, as we can see in Figure 1 and Table 2. The majority of municipalities with more than 20,000 inhabitants (91 per cent of the municipalities in the highest section and 89 per cent of those with 20,001–50,000 inhabitants) have Consultative Boards, whereas in the municipalities of both lower population sections their absence predominates: only 15 per cent of the municipalities with 5,001–20,000 inhabitants and 7 per cent of the municipalities with 1,001–5,000 inhabitants do have them. The first Consultative Board that cities usually set up is the City Board, which is the more generic and where the most important city associations are represented. But, the largest number of boards are sectorial, that is, devoted to a specific collective, issue or problem. Also, there are District Boards that design and supervise community and urban plans at this level.

With respect to the amount of initiatives undertaken by the municipalities, if we differentiate between the two main population groups²¹ there is a sharp

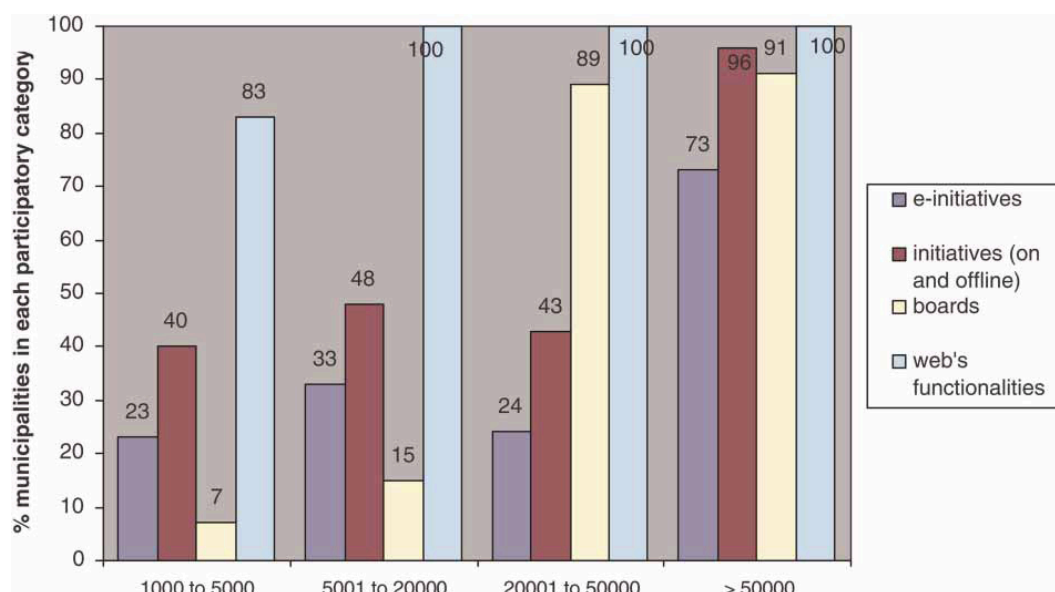


FIGURE 1 Participatory initiatives by population size.

contrast that again reminds us of the relevance of population size. The average number of on- and offline initiatives undertaken by municipalities with over 20,000 inhabitants is 2.22 in contrast to an average of 0.81 in the case of municipalities having under 20,000 people. In Table 3, we can see the distribution of the number of initiatives along the two population groups.

As we can see, 56 per cent of towns and cities with fewer than or equal to 20,000 inhabitants have not undertaken any form of participation and only 5 per cent have carried out more than four. The proportion is even lower in the case of electronic initiatives for participation: 71 per cent have not displayed any initiative and only around 2 per cent have displayed more than four. The municipalities with more than 20,000 inhabitants show much higher percentages: 25 per cent

TABLE 3 Distribution of participatory initiatives by the two main population groups.

| | $\leq 20,000$ | $> 20,000$ |
|---|---------------|------------|
| Number of online initiatives | | |
| 0 | 71.4% (45) | 56.7% (34) |
| 1–3 | 26.9% (17) | 31.7% (19) |
| >4 | 1.6% (1) | 11.7% (7) |
| Total | 100% (63) | 100% (60) |
| Number of initiatives (on- and offline) | | |
| 0 | 55.6% (35) | 36.7% (22) |
| 1–3 | 39.7% (25) | 38.3% (23) |
| >4 | 4.8% (3) | 25% (15) |
| Total | 100% (63) | 100% (60) |

have undertaken more than four participatory initiatives and 12 per cent more than four online initiatives, whereas 37 per cent have not carried out any form of participation.

5.2. *City council web site functionalities*

Regarding the interactive and participative functionalities that city councils make available on their web sites, we have checked whether they have this and, if so, how many of the following channels they have: a mailbox for receiving complaints and suggestions; a mailbox or an email address for citizens to contact municipal officials (mayor, town or city councillor) or the town or city council in general; a mailbox associated to municipal services; forums to debate specific and general issues; blogs from politicians or citizens hosted on the municipality's web site and, finally, online surveys and consultations.

In the description of the existence and number of these functionalities, we will again differentiate between the two main population groups: municipalities with more than 20,000 inhabitants and those with fewer than or equal to 20,000 people. Figure 2 shows the distribution of the web site functionalities.

As we can see, the communicative functions are the most frequently available on web sites. These are as follows: mailboxes for complaints and suggestions, email addresses for contacting the mayor, councillors or the council in general and email

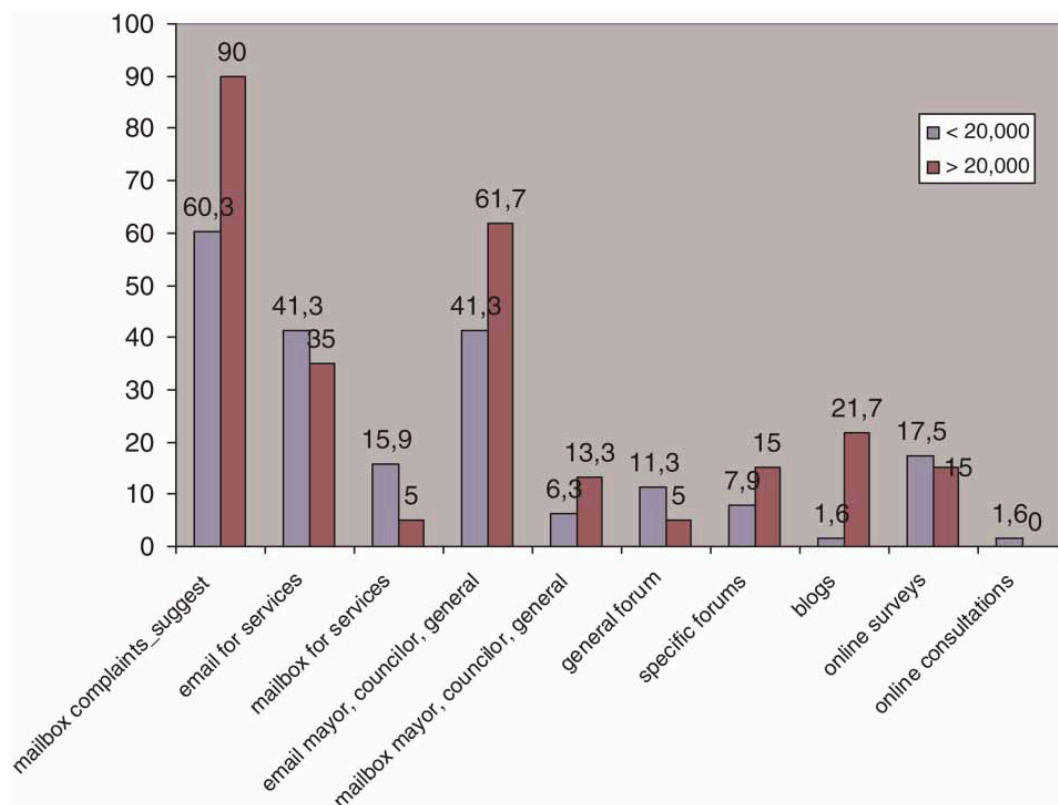


FIGURE 2 Percentage of municipalities by web functionality.

addresses for obtaining services and conducting transactions. These results are in line with what other studies in Catalonia have found (Salvador *et al.* 2004; FOBSIC and Localret surveys).

With respect to the deliberative mechanisms, such as general or specific electronic forums and blogs, there are fewer municipalities that have them in the two population groups. If we compare the two groups, it is worth pointing out that 22 per cent of the larger municipalities have blogs on their web sites in contrast to only 1.6 per cent of the smaller ones. Regarding the consultative type of functionalities, such as online surveys and consultations, these are more frequent among the municipalities with <20,000 inhabitants. Among these, 17.5 per cent of these municipalities have displayed surveys on their webs in contrast to 15 per cent of their larger counterparts. Here it is note worthy that there are several small towns such as Sant Bartomeu del Grau or Callús that frequently make use of these mechanisms, which could be easier – technically and politically – to use in a controlled and reduced territory than in a big city. Interestingly enough, there are other three channels where the smaller municipalities surpass in number the larger municipalities: email and mailbox for services and the generic forums. The reasons for these differences need to be investigated, taking into account that the sampling procedures can have some impact on the results.

5.3. *Explanatory analysis*

First of all, we have examined the relationship between political variables (level of abstention in the local elections²² and party of the mayor) and the number of participatory initiatives (on- and offline altogether). The cross-tabulation shows that the relationship between these variables and the participatory initiatives is not statistically significant but the distribution of percentages, a few Cramer's *V*'s (values around 0.3) and a few adjusted residuals show some relevant interactions. Different recodifications of the dependent variable (number of participatory initiatives) have been made. The most clear recodification is the one that distinguishes between municipalities that have carried out one or more initiatives and the ones that have not developed any. In the case of the municipalities with fewer than 20,000 people, as we can see in Table 4, 62 per cent of the municipalities with the highest abstention rate have set up one or more initiatives in contrast to only 21 per cent of the towns with the lowest level of abstention.

Among the cities and towns with more than 20,000 inhabitants, 98 per cent of the municipalities have an abstention rate of more than 34 per cent and 64 per cent of them have developed one or more participatory initiatives (Table 5).

Other recodifications of the dependent variable, i.e. following categories of 0, 1–3 and 4–12 initiatives, also show that the higher the abstention rate, the more participatory initiatives municipalities undertake.

With respect to the party affiliation of the mayor, the results are again not statistically significant and not even Cramer's *V* or the adjusted residuals are high

TABLE 4 Participatory initiatives x percentage of abstention in the local elections of 2003 (fewer than 20,000).

| | % abstention 2003 | | | Total |
|--------------------|-------------------|--------|------|-------|
| | <23% | 23–34% | >34% | |
| Initiatives | | | | |
| 0 | | | | |
| Frequency | 11 | 16 | 8 | 35 |
| % abstention 2003 | 78.6 | 57.1 | 38.1 | 55.6 |
| Adjusted residuals | 2 | 0.2 | –2 | |
| ≥1 | | | | |
| Frequency | 3 | 12 | 13 | 28 |
| % abstention 2003 | 21.4 | 42.9 | 61.9 | 44.4 |
| Adjusted residuals | –2 | –0.2 | 2 | |
| Total | | | | |
| Frequency | 14 | 28 | 21 | 63 |
| % abstention 2003 | 100 | 100 | 100 | 100 |
| % total | 22.2 | 44.4 | 33.3 | 100 |

enough to denote a relationship between the variables. Nevertheless, as is shown in Table 6, the impulse towards participations is stronger among the parties on the left and the local and independent candidatures. That is, among the

TABLE 5 Participatory initiatives x percentage of abstention in the local elections of 2003 (more than 20,000).

| | % abstention 2003 | | Total |
|-------------------|-------------------|------|-------|
| | 23–34% | >34% | |
| Initiatives | | | |
| 0 | | | |
| Frequency | 1 | 21 | 22 |
| % abstention 2003 | 100 | 35.6 | 36.7 |
| ≥1 | | | |
| Frequency | 0 | 38 | 38 |
| % abstention 2003 | 0 | 64.4 | 63.3 |
| Total | | | |
| Frequency | 1 | 59 | 60 |
| % abstention 2003 | 100 | 100 | 100 |
| % total | 1.7 | 98.3 | 100 |

TABLE 6 Participatory initiatives x party of the mayor in 2003 (fewer than 20,000).

| | <i>party of the mayor</i> | | | | <i>total</i> |
|----------------------|---------------------------|------------|------------|--------------------|--------------|
| | <i>CiU</i> | <i>PSC</i> | <i>ERC</i> | <i>local lists</i> | |
| Initiatives | | | | | |
| 0 | | | | | |
| Frequency | 17 | 12 | 2 | 4 | 35 |
| % party of the mayor | 65.4 | 57.1 | 28.6 | 44.4 | 55.6 |
| ≥1 | | | | | |
| Frequency | 9 | 9 | 5 | 5 | 28 |
| % party of the mayor | 34.6 | 42.9 | 71.4 | 55.6 | 44.4 |
| Total | | | | | |
| Frequency | 26 | 21 | 7 | 9 | 63 |
| % party of the mayor | 100 | 100 | 100 | 100 | 100 |
| % total | 41.3 | 33.3 | 11.1 | 14.3 | 100 |

municipalities with fewer than 20,000 inhabitants, 43 per cent of the municipalities under PSC²³ governments, 71 per cent from ERC²⁴ and 56 per cent with mayors belonging to local or independent candidatures have undertaken one or more participatory activities compared with 35 per cent of the municipalities with mayors belonging to CiU.²⁵

Within the municipalities with more than 20,000 inhabitants, the same tendency is observed, although both the CiU and the PSC are more participatory. As we can see in Table 7, 45.5 per cent of the municipalities with mayors belonging to the CiU have undertaken one or more initiatives, as well as the 68 per cent of the municipalities under the PSC, the 75 per cent of those belonging to the ICV²⁶ and the 50 per cent of the municipalities with mayors belonging to local or independent candidatures.

In addition, the concentration of initiatives is more frequent among the left: 13 municipalities from the left-leaning parties have organized from 4 to 12 participatory processes in contrast to only one municipality from the CiU. However, the PSC is much more participatory in the highest population section than in the lower.

Therefore, the rate of abstention and the political affiliation of the mayor affect the existence of participatory initiatives and the number of them undertaken. That is, the higher the abstention rate the more initiatives will exist and, also, the mayors on the left and from local and independent candidatures carry out more participatory processes than the CiU. Nevertheless, the lack of statistical significance and the interaction of the political variables with population size indicate that some controls are needed. We have to take into account that 98 per cent of the municipalities with more than 20,000 inhabitants have an abstention rate of more than 34 per cent (Table 5) and 68 per cent of these

TABLE 7 Participatory initiatives × party of the mayor in 2003 (more than 20,000).

| | <i>party of the mayor</i> | | | | <i>total</i> |
|----------------------|---------------------------|------------|------------|--------------------|--------------|
| | <i>CiU</i> | <i>PSC</i> | <i>ICV</i> | <i>local lists</i> | |
| Initiatives | | | | | |
| 0 | | | | | |
| Frequency | 6 | 13 | 1 | 2 | 22 |
| % party of the mayor | 54.5 | 31.7 | 25 | 50 | 36.7 |
| ≥1 | | | | | |
| Frequency | 5 | 28 | 3 | 2 | 38 |
| % party of the mayor | 45.5 | 68.3 | 75 | 50 | 63.3 |
| Total | | | | | |
| Frequency | 11 | 41 | 4 | 4 | 60 |
| % party of the mayor | 100 | 100 | 100 | 100 | 100 |
| % total | 18.3 | 68.3 | 6.7 | 6.7 | 100 |

municipalities have mayors belonging to the PSC (Table 7). In addition, both the CiU and PSC are more participatory within the highest population section, although the PSC still prevails over CiU in the number of municipalities with one or more initiatives. Also, the population size and the abstention rate are highly and significantly correlated within both population sections (0.671 among municipalities with fewer than 20,000 inhabitants and 0.338 among municipalities with more than 20,000 inhabitants).

Population size also interacts with the province of the municipality. Barcelona is the province with the largest number of municipalities that have undertaken participatory initiatives in the case of the ones with fewer than 20,000 inhabitants (67 per cent) and it is the second one – after Tarragona – in the case of municipalities with more than 20,000 inhabitants (54.5 per cent) but is also the province with the greatest population and more municipalities. Seventy-two per cent of the Catalan municipalities with more than 20,000 people and 52 per cent of the ones with fewer than 20,000 belong to the Barcelona province.

Taking all of these interactions into account and with the objective of controlling for them, we conducted a series of different kinds of regression analysis with all the possible explanatory variables mentioned in previous pages: population size, party of the mayor, electoral abstention rate, percentage of population with a university degree, percentage of citizens with a job, family income per capita available, average age and province. We carried out multiple linear regression, logit and ordinal probit analyses. We decided to conduct logit²⁷ and probit analyses because the dependent variable (the number of participatory initiatives) is not continuous, it only goes from 0 activities to a maximum of 12 and the distribution does not follow a logical decreasing pattern.²⁸ However, the

best results in terms of significance and explanatory power were obtained after linear regression analysis. Furthermore, the results are statistically significant only for the municipalities with more than 20,000 inhabitants.

Table 8 shows that this entire set of variables explained 64 per cent of the variance of the dependent variable for the municipalities with more than 20,000 inhabitants. In addition, three independent variables are statistically significant: population size – which is the most significant – age and whether the mayor belongs to the ICV. That means that as population increases and age decreases the number of participatory initiatives grows. In addition, the number of participatory initiatives increases 2.4 times with respect to the CiU – which is the control category – when the mayor belongs to the ICV. The population size is the most influential variable not only in the regression model but also in the few logits that were significant. In the case of municipalities with fewer than

TABLE 8 Regression analysis coefficients^a (more than 20,000).

| | <i>coefficients</i> | | <i>standardized coefficients</i> | | |
|---------------------------------|---------------------|-----------------------|----------------------------------|----------|---------------------|
| <i>model</i> | <i>B</i> | <i>standard error</i> | <i>beta</i> | <i>t</i> | <i>significance</i> |
| (Constant) | −8.620 | 12.060 | | −0.715 | 0.478 |
| % local abstention 2003 | −0.083 | 0.102 | −0.115 | −0.810 | 0.422 |
| Family income thousand euros | 0.297 | 0.524 | 0.170 | 0.566 | 0.574 |
| % university degree | 0.017 | 0.207 | 0.022 | 0.083 | 0.934 |
| Ln Population | 2.901*** | 0.436 | 0.862 | 6.656 | 0.000 |
| % working population | −0.034 | 0.091 | −0.051 | −0.376 | 0.709 |
| Age | −0.499* | 0.201 | −0.288 | −2.486 | 0.017 |
| PSC | 0.281 | 0.732 | 0.048 | 0.383 | 0.703 |
| ICV | 2.381* | 1.210 | 0.218 | 1.968 | 0.050 |
| Local lists | 1.271 | 1.117 | 0.117 | 1.138 | 0.261 |
| Tarragona | −0.687 | 1.094 | −0.086 | −0.628 | 0.533 |
| Girona | −1.370 | 1.231 | −0.171 | −1.113 | 0.272 |
| Lleida | −3.273 | 1.996 | −0.154 | −1.639 | 0.108 |

Note: $N = 60$, $R^2 = 0.638$, standard error = 1.849, $F = 6.908$, significance = 0.000.

^aDependent variable: total number of on- and offline participatory initiatives.

* $p \leq 0.05$.

*** $p \leq 0.001$.

20,000 inhabitants, neither the model nor any of the variables is statistically significant.

With respect to online processes and web functionalities, we analysed, on the one hand, the number of online processes and, on the other, this number plus the number of web functionalities. We also conducted a series of linear regression, logit and probit analyses with all possible explanatory variables including the broadband supply as well, and the number of Internet users in the municipality.²⁹ As in the case of the previously analysed dependent variables, the number of online processes and the sum of online processes and web channels are not continuous and the distributions lack a logical decreasing pattern. Again, the results are only significant for the municipalities with more than 20,000 inhabitants. For this population section, one logit and one linear regression analysis have produced significant results. That is, the model of variables tested has a good explanatory power³⁰ and two variables are significant: population size and age (the coefficient with a negative sign). Neither the broadband supply at home nor the Internet connection during the last 3 months has any significant effect.

6. Conclusions

The participatory initiatives and processes in Catalonia are widespread, though their expansion depends on population size. Ninety-six per cent of municipalities with more than 50,000 inhabitants have undertaken off- and online participatory activities, 43 per cent of municipalities with 50,000–20,001 inhabitants, 48 per cent of municipalities with 20,000–5,001 inhabitants and 40 per cent of municipalities with 5,000–1,000. The impact of population size is even stronger if we take into account only online initiatives: 73 per cent of municipalities with more than 50,000 inhabitants have undertaken online participatory activities, 24 per cent of municipalities with 50,000–20,001 inhabitants, 33 per cent of municipalities with 20,000–5,001 inhabitants and 23 per cent of municipalities with 5,000–1,000 inhabitants. Municipalities with over 20,000 people undertake as a mean 2.22 participatory activities in contrast to those having under 20,000 that carry out only 0.81 activities as a mean.

Web sites and their interactive channels for communication with citizens are much more widespread than participatory initiatives. Hundred per cent of municipalities in the three highest population sections have set up web sites and at least one communicative channel, but 83 per cent of the municipalities with 5,000–1,000 inhabitants have a city council web site or a municipality web site and at least one communicative channel.

The communicative functions such as mailboxes for complaints and suggestions and a contact email with the city council officials (mayor, councillors, in general) are the most frequent channels on the web sites. For example, 90 per cent of municipalities with more than 20,000 inhabitants and 60 per cent

of municipalities with fewer than 20,000 have mailboxes for complaints and suggestions. But the deliberative mechanisms such as electronic forums and blogs or consultative mechanisms such as online surveys and consultations are much less frequent (between 22 per cent and 2 per cent of municipalities). In the case of online surveys and consultations, generic forums, email and mailboxes for services, there are more municipalities with fewer than 20,000 inhabitants that have displayed these kinds of initiatives. Could it be that for the smaller municipalities these electronic channels are more necessary than for the larger ones? Perhaps municipalities having under 20,000 inhabitants are developing a different style in the use of ICTs for the interaction with the citizenry in the sense that they are focusing more on setting up specific electronic devices for consultation and deliberation.³¹ Further investigation on this should be carried out and also we have to take into account the bias in the way we selected the sample of municipalities with fewer than 20,000 inhabitants.

Therefore, currently, not only do a large amount of Catalan municipalities have web sites and hold on their webs communication channels, but there is also the necessary infrastructure to develop further more electronic initiatives. In 2007, around 90 per cent of the city councils and almost half of the population had broadband connection and 31 per cent of the population uses the Internet once a day.³²

Apart from the description of the prevalence and types of participatory initiatives, this article has attempted to explain them and, in that sense, to complete part of the knowledge gap that case studies have not filled in. We have collected a set of variables considered as the most relevant in the literature. They are sociological, economic, technological and political variables, which characterize the municipalities. Regarding political variables, we have found that the higher the abstention rate the higher the probability of undertaking one or more initiatives and, also, mayors on the left and from local and independent candidatures carry out more participatory processes than the CiU. But in these relationships, the population size again plays an important role that needs to be controlled for because the majority of municipalities of over 20,000 inhabitants have a high abstention rate and their mayors generally belong to the PSC. In fact, the population size affects municipalities led both by the PSC and by CiU. That is, both CiU and PSC deploy more participatory initiatives when they rule municipalities with over 20,000 inhabitants. In addition, the province can interact with population size since Barcelona is the most participatory province but has the majority of the largest municipalities.

In order to ascertain the impact of our set of variables, we carried out linear regression, logit and probit analyses. The results are explanatory for the municipalities with more than 20,000 inhabitants but are not significant for the municipalities with fewer than 20,000 inhabitants. The highest significance and R^2 were obtained after multiple regression analysis, which shows that three independent variables have a significant impact on participatory initiatives: population size – which is the most significant – age and whether or not the mayor belongs

to the ICV. This confirms that population size is a very relevant variable. Therefore, belonging to the PSC or to Barcelona's province have no direct effect on the participatory level because the population dimension is the determinant variable.³³ Also, the number of participatory initiatives increases when the mayor belongs to the ICV, the party with parliamentary representation which is the furthest to the left in the political spectrum. In addition, the average age of the population has an impact in the organization of participatory initiatives by the city council: when the average age of a population rises, the number of initiatives decreases.

With regard to online processes and web channels, the same set of variables plus broadband extension and number of Internet users were included in the linear regression, probit and logit analyses. The results are only explanatory for the municipalities with more than 20,000 inhabitants, as well. Again, population size and average age in the municipality stand as statistically significant, although the first one is the most relevant.

To conclude, in Catalonia there are numerous participatory initiatives both on- and offline but their expansion depends on population size because the political variables, the territorial situation, even the technological and socio-economic conditions are very linked to the population dimension. In that sense, the institutional impulse and support for participatory initiatives in the small municipalities and in the provinces of Lleida, Girona and Tarragona are very necessary. On the other hand, lately, the local and autonomic governmental support and regulations for participation on- and offline have become more planned and strategically integrated, but there is still fragmentation and a lack of coordination in many initiatives. Also, e-participation initiatives are not so widespread and the most frequent web functionalities are mailboxes for complaints and the contact email, leaving behind more deliberative and participatory channels. Finally, many small municipalities neither have a web nor they have participatory initiatives. In all these areas there is still a long way to go.

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Notes

- 1 Mainly at the local level, but nowadays the support comes also from the Catalan government.

- 2 Among the local factors and in addition to municipality size, there are also political variables such as electoral abstention (in the sense that the impulse for participation can be related to governmental interest in reducing abstention), electoral competition and the existence of technical, logistic and financial networks that support participatory initiatives.
- 3 Law 57/2003, 16 December 2003, of Measures of Modernization of the Local Government. Available online at: <http://www.boe.es/boe/dias/2003/12/17/pdfs/A44771-44791.pdf>
- 4 First Order REP/119/2005, 14 March 2005. Available online at: <http://www.gencat.net/diari/4357/05067212.htm>
- 5 The 'Diputació' of Barcelona is a kind of provincial government whose main role is to help municipalities.
- 6 Some institutions have become the first driven force of these networks: a governmental institution ('Flor de Maig' Patronage of the Diputació de Barcelona), a private foundation (Fundació Jaume Bofill) and the Post-graduate Programme on Citizen Participation (at the Autonomous University of Barcelona).
- 7 'Consensus' is a project that was initiated in 2000 by the Fundació Jaume Bofill, the Localret Consortium and the Catalan Institute of Technology. It is a shared interactive tool that provides information and allows consultation, debate and citizen participation through the municipalities' web site. See the new edition at <http://www.consensus.cat>
- 8 Figures from the 2006 survey on ICT adoption by the local administrations in Catalonia, carried out by the Localret Consortium and FOBSIC. Available online at: <http://www.localret.es/enquestatic2007/informeticajuntaments2006.pdf>
- 9 Figures from the Catalan Statistics Institute at: <http://www.idescat.net>
- 10 For a description and classification of the different types and issues of the participatory initiatives see Martí and Rebollo's (2006) report on initiatives taking place in the province of Barcelona.
- 11 <http://www.idescat.cat>
- 12 IDIGOL (Democratic Innovation and Local Government of Catalonia) database is available online at: <http://www16.gencat.net/idigol/cat/main.htm>
- 13 OIDP (International Observatory for Participative Democracy) database is available online at: <http://www.oidp.net>
- 14 <http://www.ine.es>
- 15 <http://www.idescat.cat>
- 16 Salvador *et al.* (2004), Criado (2004), Brown and Schelin (2005) and Martí and Rebollo (2006). Also, surveys from Localret and the Observatory of Information Society (FOBSIC) indicate that the development of interactive and participatory channels depend on the municipality's population size (see surveys available online at: <http://www10.gencat.net/dursi/>

- ca/si/observatori/estadistiques.htm and <http://www.localret.es/enquestatic2007/informeticajuntaments2006.pdf>).
- 17 The selected sections are the usual ones in studies of municipalities and they come from article 26 of Law 7/1985, which regulates the bases of the local government in Spain.
 - 18 The sampling objective was to obtain at least 30 municipalities per each population section but keeping maximum variability regarding the existence or not of participatory activities. Hence a serial of random numbers were generated and following them we carried out several selection turns, so we finished up with a balanced sample of municipalities with or without participatory initiatives.
 - 19 Catalonia is divided into four provinces and 41 historical regions, both with their capitals.
 - 20 However, in order to obtain a sufficient number of municipalities with participatory processes, it was necessary to carry out up to three turns of random selection, so it becomes clear again that the smaller the population, the less the number of participatory initiatives.
 - 21 Actually, we will conduct all the analysis into each of the two population groups because they belong to different samples that cannot be added: in the first group – more than 20,000 inhabitants – we have the universe and in the second – fewer than or equal to 20,000 – we selected a sample.
 - 22 We consider a high abstention rate as 34 per cent of the electorate who has not voted, a medium abstention rate as between 34 per cent and 23 per cent and a low abstention rate as lower than 23 per cent.
 - 23 Partit dels Socialistes de Catalunya (PSC) is a centre-left party that has led the Catalan government since 2003. It usually achieves the largest number of votes in local elections.
 - 24 Esquerra Republicana de Catalunya (ERC) is a left-leaning party that strives for the independence of Catalonia and it is the fourth or third political force depending on the elections.
 - 25 Convergència i Unió (CiU) is a centre-right nationalist party, which has a presence throughout Catalonia and an especially strong presence in small towns. In the local elections usually gains the largest number of councillors.
 - 26 Iniciativa per Catalunya – Els Verds (ICV) is a small left-leaning party, concentrated in larger cities, which strongly defends the carrying out of participatory initiatives.
 - 27 The number of participatory initiatives was recodified into a dummy variable that consists of ‘0’ and ‘1 or more than 1’ categories.
 - 28 That is, among municipalities with fewer than 20,000 people, the most frequent value is 0, the second most frequent is 1, but the third most frequent value is 3 initiatives instead of 2. Also, among municipalities with more than 20,000 people, the most frequent value is 0, the second most frequent is 1, but then there are the same number of municipalities that have

- developed 2, 3 and 4 initiatives. Therefore, for the ordinal probit analysis the dependent variable was recodified – in the case of municipalities with more than 20,000 – into one ordinal variable that consist of ‘0, 1, 2, 3, 4 and more than 4’, and into another ordinal variable that consist of ‘0, 1, 2, 3 and more than 3’ in the case of municipalities with fewer than 20,000 people.
- 29 The number of Internet users was measured by the number of people that have connected to the Internet in the last 3 months. This variable and the existence of broadband are only available for the 41 Catalan regions but not for each individual municipality so we use the data on the regions. <http://www.idescat.cat>
- 30 In the linear regression, $R^2 = 0.502$. In the logit analysis, 75 per cent of values are predicted when the modal prediction is 56.7 per cent and the Cox and Snell $R^2 = 0.323$.
- 31 One study about citizen participation in small municipalities in Catalonia (IGOP 2005) points out this possibility although it also remarks that small municipalities usually mirror the participatory methods and procedures from larger cities.
- 32 <http://www.idescat.cat>
- 33 These results are in line with Martí and Rebollo’s (2006, p. 44) conclusions.

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